

Application No. : 10/695,405
Amdt. Dated : January 24, 2006
Reply To O.A. Of : July 25, 2005

Amendments To The Claims

The listing of claims replaces all prior versions and listings of claims.

Claim 1. (Canceled).

Claim 2. (New) A noninvasive physiological monitor comprising:
a noninvasive light source;
a magnetic field generator which imposes a magnetic field on tissue;
a noninvasive detector which generates an output responsive to light from
said light source attenuated by said tissue and acted upon by said magnetic
field; and

 a processor responsive to said output to compensate a determination of
values indicative of a blood constituent for light scattering within said tissue.

Claim 3. (New) The noninvasive physiological monitor of Claim 2,
wherein said values comprise concentration values of said blood constituent.

Claim 4. (New) The noninvasive physiological monitor of Claim 2,
wherein said blood constituent comprises glucose.

Claim 5. (New) The noninvasive physiological monitor of Claim 2,
wherein said processor compensates said determination of values by determining an
indication of optical path length for said light from said light source.

Claim 6. (New) The noninvasive physiological monitor of Claim 5,
wherein said indication of said optical path length comprises mean optical path length
estimates.

Claim 7. (New) The noninvasive physiological monitor of Claim 2,
comprising a polarimeter responsive to said light source and including said detector.

Claim 8. (New) The noninvasive physiological monitor of Claim 7,
wherein said polarimeter comprises a Faraday modulator.

Claim 9. (New) The noninvasive physiological monitor of Claim 7,
wherein said polarimeter comprises a photoelastic modulator.

Claim 10. (New) The noninvasive physiological monitor of Claim 2,
wherein said light source comprises a polarized light source.

Application No. : 10/695,405
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Claim 11. (New) A method of compensating a determination of values indicative of a blood constituent, the method comprising:

applying one or more magnetic fields to tissue illuminated with light;

determining rotation of said light based on said application of one or more magnetic fields; and

compensating a determination of values indicative of a blood constituent based on said rotation.

Claim 12. (New) The method of Claim 11, wherein said compensating comprises:

determining an indication of optical path length for said light; and

applying said indication to determine a concentration of said blood constituent.

Claim 13. (New) The method of Claim 12, wherein said indication of said optical path length comprises mean optical path length estimates.

Claim 14. (New) The method of Claim 11, wherein said blood constituent comprises glucose.

Claim 15. (New) A noninvasive optical sensor capable of outputting a signal indicative of one or more physiological parameters of tissue, the optical sensor comprising:

a light source;

a magnetic field source; and

a detector responsive to one or more wavelengths of light from said light source and one or more magnetic fields from said magnetic field source.

Claim 16. (New) The noninvasive optical sensor of Claim 15, wherein said optical sensor is housed in a patient monitor.

Claim 17. (New) The noninvasive optical sensor of Claim 15, comprising one or more coil pairs.

Claim 18. (New) The noninvasive optical sensor of Claim 15, comprising a magnet pair.

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Claim 19. (New) The noninvasive optical sensor of Claim 15, comprising a Faraday modulator.

Claim 20. (New) The noninvasive optical sensor of Claim 15, comprising a photoelastic modulator.

Claim 21. (New) The noninvasive optical sensor of Claim 15, wherein said blood constituent comprises glucose.